

SPECIFICATION AMENDMENTS:

Please amend the specification by replacing paragraph [052] bridging pages 19 and 20, with the following new paragraph:

B, [052] In conjunction with this sheath delivery technique described above, various mechanisms, as shown for example in FIGS. 11-13, either alone or in combination, may be employed to facilitate appropriate positioning of the catheter and the stent with respect to the heart wall. In these embodiments of the invention, once the sheath has been inserted in the heart wall to dilate the heart wall and form the passageway, the sheath can then be retracted from the heart wall until a distal tip of the sheath resides within the coronary artery. Referring to FIG. 11, the distal tip of a sheath 200 may include a stop mechanism, such as, for example, an expandable basket 133 surrounding the distal opening of the sheath 200. Preferably, basket 133 is self-expanding, such as a nitinol basket for example, and has a diameter ranging from approximately 2 mm to approximately 3 mm. The basket 133 positions the distal tip of the sheath 200 in the coronary artery and fixes this position by engaging with either the posterior or anterior walls of the coronary artery to prevent sheath 200 from passing therethrough. Once the sheath 200 is positioned, the stent may be delivered to the heart wall by placing stent 12 just distal to the tip of sheath 200. The distance between the distal tip of sheath 200, positioned at the inner surface of the posterior wall of the coronary artery, and the top of stent 12 may be determined by graduated markings on a portion of a balloon catheter 132 carrying stent 12 and extending outside sheath 200.

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Please replace paragraph [054] bridging pages 20 and 21 of the specification with the following new paragraph:

B2 [054] FIG. 12 illustrates another mechanism which may be employed to facilitate the positioning of stent 12 within the heart wall. In this embodiment, after sheath 200 is inserted into the coronary artery, a double balloon catheter 142 is inserted over guidewire 60 and through sheath 200. Double balloon catheter 142 includes a distal balloon 143 carrying stent 12 and a smaller proximal balloon 144 that serves as a mechanical stop mechanism. Proximal balloon 144 preferably has a diameter ranging from approximately 2 mm to approximately 3 mm. Once balloon catheter 142 is inserted such that proximal balloon 144 is past the distal tip of sheath 200, proximal balloon 144 may be inflated. This inflation causes proximal balloon 144 to expand substantially in a horizontal direction past the distal opening of the sheath and to engage the anterior and posterior walls of the coronary artery. This holds the balloon catheter 142 in an appropriate position to place stent 12 within the heart wall. Distal balloon 143 can then be inflated to deliver stent 12. By positioning the distal end of proximal balloon 144 adjacent the posterior coronary artery wall and knowing the distance between the distal end of proximal balloon 144 and the proximal end of stent 12 on distal balloon 143, the depth of insertion within the heart wall may be determined.

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DRAWING AMENDMENTS:

Subject to the approval of the Examiner, please replace all of the originally-filed drawing sheets with the replacement drawing sheets filed herewith.

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